

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1. (Currently Amended) A message routing method for routing application-level messages
2 from one or more sending services to one or more recipient services across a message
3 interchange network, comprising:

4 (a) receiving a an application-level message from a sending service, said application-level
5 message including a header element and at least one of: a body element including one or more
6 documents that a sending service is sending to a recipient service, and an attachment including
7 one or more documents that a sending service is sending to a recipient service;

8 (b) determining a route path for delivery of said message to one or more recipient services,
9 said route path including one or more in-transit services, wherein said determining being based
10 on one or more of: a reference to a service identified in said header element, a routing script
11 defined by a sending service, a routing script defined by a recipient service, and a routing script
12 defined by an in-transit service; and

13 (c) delivering said message to an in-transit service in said route path, wherein said in-
14 transit service performs an identifiable operation on said message as said message travels from a
15 sending service to a recipient service, the identifiable operation altering the content of the
16 message to ensure that the message has the proper format for the recipient service.

1 2. (Cancelled)

1 3. (Previously Presented) The message routing method of claim 1, wherein said header
2 element is an extensible markup language header element.

1 4. (Currently Amended) The message routing method of claim 1, wherein said one or more
2 documents in said body element and said one or more documents in said attachment can
3 accommodate any type of data.

1 5. (Original) The message routing method of claim 4, wherein said data includes extensible
2 markup language data.

- 1 6. (Original) The message routing method of claim 4, wherein said data includes text data.
- 1 7. (Original) The message routing method of claim 4, wherein said data includes binary data.
- 1 8. (Previously Presented) The message routing method of claim 1, wherein said message
2 further includes routing and route trace elements.
- 1 9. (Original) The message routing method of claim 1, wherein said receiving is based on the
2 Simple Object Access Protocol.
- 1 10. (Original) The message routing method of claim 1, wherein said receiving includes
2 receiving said message from a party that sends said message on behalf of a sender.
- 1 11. (Cancelled)
- 1 12. (Canceled)
- 1 13. (Canceled)
- 1 14. (Canceled)
- 1 15. (Canceled)
- 1 16. (Canceled)
- 1 17. (Previously Presented) The message routing method of claim 1, wherein said determining
2 is recursive.
- 1 18. (Previously Presented) The message routing method of claim 1, wherein said determining
2 occurs prior to physical delivery of said message.
- 1 19. (Previously Presented) The message routing method of claim 1, wherein said determining
2 occurs dynamically during logical and physical delivery of said message.
- 1 20. (Previously Presented) The message routing method of claim 1, wherein a routing script

- 2 defines a procedure that determines an existence of one or more attributes of the message.
- 1 21. (Previously Presented) The message routing method of claim 1, wherein a routing script
2 defines a procedure based on pattern matching.
- 1 22. (Previously Presented) The message routing method of claim 1, wherein a routing script
2 defines a procedure that compares one or more attributes of a message to a reference value.
- 1 23. (Previously Presented) The message routing method of claim 1, wherein a routing script is
2 based on a routing rule, said routing rule including a condition and one or more actions.
- 1 24. (Original) The message routing method of claim 23, wherein said condition is one of an
2 equals, not-equals, equals-one-of, less-than, greater-than, and exists operators.
- 1 25. (Original) The message routing method of claim 23, wherein said condition is a
2 combination of one or more conditions.
- 1 26. (Original) The message routing method of claim 25, wherein said one or more conditions
2 are combined using one or more of an AND, OR, XOR, and NOT operators.
- 1 27. (Original) The message routing method of claim 1, wherein said delivering includes
2 pushing said message to said in-transit service.
- 1 28. (Original) The message routing method of claim 1, wherein said delivering includes
2 delivering said message upon a polling action by said in-transit service.
- 1 29. (Original) The message routing method of claim 1, wherein said delivering includes
2 delivering said message to said in-transit service for one of a data transformation operation, an
3 enrichment operation, a cross-reference ID mapping operation, a filtering operation, and a credit
4 scoring operation.
- 1 30. (Original) The message routing method of claim 1, further comprising logging usage,
2 status, and billing information after processing said message.
- 1 31. (Original) The message routing method of claim 1, further comprising delivering said

2 message to said recipient service after said message has been routed to all in-transit services in
3 said route path.

1 32. (Currently Amended) A message routing system, comprising:
2 a message routing network that enables ~~message routing~~ of application-level messages
3 between a sending service and one or more recipient services, said message routing network
4 further enabling inclusion of a plurality of in-transit services into said message routing network,
5 wherein an in-transit service can be selectively included in a routing for a message based upon an
6 identifiable type of processing that said in-transit service can perform on said message.

1 33. (Original) The message routing system of claim 32, wherein said in-transit service
2 performs one of a data transformation operation, an enrichment operation, a cross-reference ID
3 mapping operation, a filtering operation, and a credit scoring operation.

1 34. (Original) The message routing system of claim 32, wherein an in-transit service is
2 included in said routing based on a routing script.

1 35. (Original) The message routing system of claim 34, wherein said routing script is defined
2 by a sending service.

1 36. (Original) The message routing system of claim 34, wherein said routing script is defined
2 by a recipient service.

1 37. (Original) The message routing system of claim 34, wherein said routing script is defined
2 by an in-transit service.

1 38. (Original) The message routing system of claim 34, wherein said routing is defined by a
2 sending service, a recipient service, and at least one in-transit service.

1 39. (Original) The message routing system of claim 34, wherein said routing is determined
2 recursively.

1 40. (Original) The message routing system of claim 34, wherein said routing is determined
2 prior to physical delivery of said message.

1 41. (Original) The message routing system of claim 34, wherein said routing is determined
2 during logical and physical delivery of said message.

1 42. (Original) The message routing system of claim 34, wherein a routing script defines a
2 procedure that determines an existence of one or more attributes of the message.

1 43. (Original) The message routing system of claim 34, wherein a routing script defines a
2 procedure based on pattern matching.

1 44. (Original) The message routing system of claim 34, wherein a routing script defines a
2 procedure that compares one or more attributes of a message to a reference value.

1 45. (Original) The message routing system of claim 34, wherein a routing script is based on a
2 routing rule, said routing rule including a condition and one or more actions.

1 46. (Original) The message routing system of claim 45, wherein said condition is one of an
2 equals, not-equals, equals-one-of, less-than, greater-than, and exists operators.

1 47. (Original) The message routing system of claim 45, wherein said condition is a
2 combination of one or more conditions.

1 48. (Original) The message routing system of claim 47, wherein said one or more conditions
2 are combined using one or more of an AND, OR, XOR, and NOT operators.

1 49. (Original) The message routing system of claim 32, wherein said message routing network
2 provides a transport level messaging service.

1 50. (Original) The message routing system of claim 32, wherein said message is delivered to
2 said recipient service after said message has been routed to all in-transit services in said route
3 path.

1 51. (Currently Amended) A computer program product, stored on a machine-readable
2 medium, for routing application-level messages from one or more sending services to one or
3 more recipient services across a message interchange network, comprising instructions operable
4 to cause a computer to:

5 ~~computer-readable program code for causing a computer to receive a~~ an application-level
6 message from a sending service, said application-level message including a header element and
7 at least one of a body element including one or more documents that a sending service is
8 sending to a recipient service, and an attachment including one or more documents that a sending
9 service is sending to a recipient service;

10 ~~computer-readable program code for causing a computer to determine a route path for~~
11 delivery of said message to one or more recipient services, said route path including one or
12 more in-transit services, wherein said determining being based on one or more of: a reference to
13 a service identified in said header element, a routing script defined by a sending service, a
14 routing script defined by a recipient service, and a routing script defined by an in-transit service;
15 and

16 ~~computer-readable program code for causing a computer to deliver said message to an in-~~
17 transit service in said route path, wherein said in-transit service has been created to perform an
18 identifiable operation on said message as said message travels from a sending service to a
19 recipient service, the identifiable operation altering the content of the message to ensure that the
20 message has the proper format for the recipient service; and

21 ~~—a computer usable medium configured to store the computer-readable program codes.~~

1 52. (Currently Amended) A message routing network method, comprising:

2 (a) receiving a registration request from a service for inclusion in a message routing
3 network, said service being operative to provide a data operation; and

4 (b) including said service in a directory of services, said directory of services enabling
5 users of said message routing network to define at least a portion of a desired data processing on
6 a an application-level message.

1 53. (Original) The message routing network method of claim 52, wherein said service
2 provides a data transformation service.

1 54. (Original) The message routing network method of claim 52, wherein said service
2 provides a data enrichment service.

1 55. (Original) The message routing network method of claim 52, wherein said service
2 provides a cross-reference service.

1 56. (Original) The message routing network method of claim 52, wherein said service
2 provides a filtering service.

1 57. (Original) The message routing network method of claim 52, wherein said service
2 provides a credit scoring service.

1 58. (Original) The message routing network method of claim 52, wherein a service is selected
2 from said directory of services by a sending service.

1 59. (Original) The message routing network method of claim 52, wherein a service is selected
2 from said directory of services by a recipient service.

1 60. (Original) The message routing network method of claim 52, wherein a service is selected
2 from said directory of service engines by an in-transit service.

1 61. (Original) The message routing network method of claim 52, further comprising storing a
2 script defined by one of a sending service, a recipient service, and an in-transit service, said
3 script mapping an invocation of a first service to an invocation of a second service, wherein
4 contexts of said invocations are managed by said message routing network.

1 62. (Original) The message routing network method of claim 61, wherein said script defines a
2 procedure for enabling determination of at least part of a routing of a message between services.

1 63. (Currently Amended) A computer program product, stored on a machine-readable
2 medium, comprising instructions operable to cause a computer to:
3 ~~computer-readable program code for causing a computer to receive a registration request~~
4 ~~from a service for inclusion in a message routing network, said service being operative to~~
5 ~~provide a data operation; and~~
6 ~~computer-readable program code for causing a computer to include said service in a~~
7 ~~directory of services, said directory of services enabling users of said message routing network to~~
8 ~~define at least a portion of a desired data processing on a an application-level message; and~~
9 ~~a computer-usable medium configured to store the computer-readable program codes.~~

1 64. (Currently Amended) A message routing system, comprising:
2 a message routing network having an interface that enables a plurality of services to post

3 application-level messages to and receive application-level messages from said message routing
4 network, at least a portion of said plurality of services providing a menu of data operations that
5 can be selectively applied to a an application-level message traversing said message routing
6 network.

1 65. (Original) The message routing system of claim 64, wherein said message routing network
2 provides a transport level messaging service.

1 66. (Original) The message routing system of claim 65, wherein said message routing network
2 is implemented on a public network.

1 67. (Original) The message routing system of claim 64, wherein said plurality of services
2 includes a service that provides a data transformation service.

1 68. (Original) The message routing system of claim 64, wherein said plurality of services
2 includes a service that provides a data enrichment service.

1 69. (Original) The message routing system of claim 64, wherein said plurality of services
2 includes a service that provides a cross-reference service.

1 70. (Original) The message routing system of claim 64, wherein said plurality of services
2 includes a service that provides a filtering service.

1 71. (Original) The message routing system of claim 64, wherein said plurality of services
2 includes a service that provides a credit scoring service.

1 72. (Original) The message routing system of claim 64, wherein a service is selected by a
2 sending service.

1 73. (Original) The message routing system of claim 64, wherein a service is selected by a
2 recipient service.

1 74. (Original) The message routing system of claim 64, wherein a service is selected by an in-
2 transit service.

1 75. (Original) The message routing system of claim 64, wherein said interface uses the Simple
2 Object Access Protocol.

1 76. (Original) The message routing system of claim 64, wherein a service is selectively
2 applied based on a routing script.

1 77. (Original) The message routing system of claim 76, wherein said routing script maps an
2 invocation of a first service to an invocation of a second service, wherein contexts of said
3 invocations are managed by said message routing network.

1 78. (Original) The message routing system of claim 76, wherein said script defines a
2 procedure for enabling determination of at least part of a routing of a message between services.

1 79. (Original) The message routing system of claim 76, wherein said routing script is defined
2 by one of a sending service, a recipient service, and an in-transit service.

1 80. (Withdrawn) A message routing system, comprising:
2 a message routing network that enables message routing between a plurality of services,
3 wherein each service provides a data operation that is applied to a message traversing said
4 routing, wherein said message routing network generates a bill for at least part of said message
5 routing based on usage of individual services.

1 81. (Withdrawn) The message routing system of claim 80, wherein said bill is generated
2 through an analysis of invocations of said plurality of services.

1 82. (Withdrawn) The message routing system of claim 80, wherein said bill is based on
2 message size.

1 83. (Withdrawn) The message routing system of claim 80, wherein said bill is determined on
2 a per transaction basis.